



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,157	12/14/2001	Anja Knuppel	Beiersdorf 756 -KGB/BSL	1726
7055 7590 03/28/2007 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER KANTAMNENI, SHOBHA	
			ART UNIT	PAPER NUMBER
			1617	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/28/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/28/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/017,157	KNUPPEL ET AL.	
	Examiner	Art Unit	
	Shobha Kantamneni	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) NONE is/are allowed.
- 6) ☒ Claim(s) 64-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1617

DETAILED ACTION

Applicant's amendment filed on 12/01/2006, cancelled claims 19-63, and added new claims 65-109.

Currently, claims 64-109 are pending, and examined herein on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 64, 74 are rejected under 35 U.S.C. 102(b) as being anticipated by Woodward et al. (US 3,726,825, PTO-892).

Woodward et al. disclose oil-in-water polyurethane compositions. It is disclosed that the oil-in-water emulsions comprising film-forming water soluble or water-dispersible polyurethane therein have properties such as water resistance, solvent resistance when applied as coating to paper, paperboard, plastic film etc. See column 2, lines 15-19; column 11, lines 3-5; column 23-24, claims 2-5.

Thus, Woodward et al. anticipate instant claims 64, 74.

Art Unit: 1617

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 64, 68, 69, 71-72, 74, 78 are rejected under 35 U.S.C. 102(e) as being anticipated by Kantner et al. (US 6,433,073, PTO-892).

Kantner et al. disclose oil-in-water cosmetic compositions comprising film forming polyurethane. It is disclosed that the oil-in-water composition comprising water soluble or water-dispersable polyurethane therein have properties such as water resistance, transfer resistance. See abstract; column 5, lines 28-35. The polyurethanes therein are cationic, anionic, or zwitterionic polyurethanes. See column 8, line 56-column 10, line 7; see Example 16 for anionic polyurethane. A body lotion oil-in-water emulsion for use as waterproof sunscreen comprising 2.4 weight percent of polyurethane, and an oil-in-water emulsion useful as water-resistant mascara comprising 6.0 weight % of polyurethane are disclosed. See column 27, TABLE XVI, TABLE XVII.

Thus, Kantner et al. anticipate instant claims 64, 68, 69, 71-72, 74, 78.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 64-75, 77-78, 87-92, 94, 99-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. (2002/0028875, PTO-892 of record) in view of Kim et al. (6,372,876, PTO-892 of record), in view of Stein et al. (5,399,563 PTO-892 of record), and in view of the Handbook of Cosmetic Science and Technology.

Anderle et al. disclose plasticized waterborne polyurethane dispersions and the general process for making polyurethane (see abstract, [0011] to [0020] at page 2). Anderle et al. also disclose the personal care compositions comprising the waterborne polyurethane dispersions and sunscreens broadly (see [0070]). Exemplified is a sunscreen lotion composition comprising water-soluble sunscreen and 7.5% of the polyurethane dispersion (see [0262]). The polyurethane dispersion is the product of the process comprising reacting at least one polyisocyanate having an average of about two or more isocyanate groups and at least one active hydrogen containing compound to form a prepolymer, and dispersing the prepolymer in water and chain extending prepolymer by reaction with at least one of water, inorganic or organic polyamine having an average of about 2 or more primary and/or secondary amine groups, or combinations

Art Unit: 1617

thereof. Aliphatic polycarboxylic acids, such as dicarboxylic acids are taught as preferred diols. See [0068]-[0084]; [0261]-[0262].

The reference does not specifically teach an oil-in-water emulsion, polyurethanes with a K value of between 25 to 100, and microemulsions.

Kim et al. teach the use of polyurethanes which are soluble or dispersible in water as aids in cosmetic compositions, and the polyurethanes therein have a glass transition temperature of at least 15°C, preferably in the range of from 30 to 100 °C, and acid numbers of from 12 to 150, K value of between 26 to 37. See column 2, lines 9-50; column 5, lines 38-45; column 8, Table. The polyurethanes are composed of at least one compound which contains two or more active hydrogens per molecule, at least one diol containing acid or salt groups, and at least one diisocyanate. For diols see Col. 3, line 53-Col. 4, line 24. The polyurethanes are taught as soluble/dispersible in water without the assistance of emulsifiers, resistant to humidity, and biodegradable. Aqueous microdispersion comprising 1-40 % by weight of the polyurethanes is also disclosed. See column 6, lines 1-7.

Stein et al. exemplify oil-in-water sunscreens as preferred sunscreen formulations (see Co1.10, line 50).

The Handbook of Cosmetic Science and Technology teaches emulsions as promoting cosmetic elegance and allows otherwise impractical combinations of ingredients, i.e. oil soluble and water soluble materials, to be used in the same product. Emulsification is taught as offering great formulation flexibility, enabling modification of such parameters as feel, viscosity and appearance, to be made

Art Unit: 1617

relatively easily. In addition, emulsions facilitate the "dosing" of active ingredients onto the skin in an aesthetically pleasing and consistent manner. Emulsions are additionally very cost effective and offer a viable means of producing a commercially successful product. See page 95. The Handbook additionally teaches that the rate of phase separation can be reduced by reducing the dispersed phase particle size. Table 4 on page 112 of the Handbook teaches microemulsions as transparent. See pages 95, 112, 115, and 117.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Stein et al. and the Handbook of Cosmetic Science and Technology to teach the sunscreen composition of Anderle in the form of an oil-in-water formulations because of the expectation of achieving a sunscreen formulation that allows a combination of oil soluble and water soluble active materials and promotes cosmetic elegance.

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to teach the polyurethane of K value of from 25 to 100 of Kim et al. as the polyurethane of Anderle, a) because both Anderle and Kim et al. are directed toward water soluble/dispersible polyurethanes for use in cosmetics; b) because of the expectation of achieving a polyurethane that is soluble/dispersible in water without the assistance of emulsifiers, and because of the expectation of achieving a sunscreen product that is resistant to humidity or water, thereby providing protection in a humid climate, and biodegradable.

Art Unit: 1617

It is respectfully pointed out that McGraw Hill Encyclopedia of Science and Technology defines a microemulsion as typically clear because the dispersed droplets are less than 100 nanometers in diameter.

Claims 79-86, 95-98, 105-109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. in view of Kim et al., Stein et al. and the Handbook of Cosmetic Science and Technology as applied to claims 64-75, 77-78, 77-78, 87-92, 94, 99-104 above, and further in view of Koch et al (6,258,963, PTO-892 of record).

Anderle et al., Stein et al., Kim et al. and the Handbook of Cosmetic Science and Technology, are applied as discussed above.

The references lack the preferred sunscreen agents.

Koch et al. teach cosmetic compositions comprising UV absorbers. Aminobenzoic acid derivatives, salicylate derivatives, cinnamate derivatives, phenylene-bis-benzimidazol-tetrasulphonic acid disodium salt, 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol), 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxyl-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-triazine and others are taught as traditional and interchangeable UV absorbers. See col. 3, line 39-col.4, line 59.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxyl-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-triazine or 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol) of Koch et al., to the composition of Anderle et

Art Unit: 1617

al. because a) Anderle et al. teach aminobenzoic acid derivatives, salicylate derivatives, and/or cinnamate derivatives as sunscreens in his compositions. 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxy-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-traizine or 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl-phenol)).

Claims 76, 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. in view of Kim et al., Stein et al. and the Handbook of Cosmetic Science and Technology as applied to claims 1, 3-4, 6-7, 11 and 18 above, and further in view of Gers-Barlag et al. (5,725,844, PTO-892 of record).

Anderle et al., Stein et al., Kim et al. and the Handbook of Cosmetic Science and Technology are applied as discussed above. The reference lacks hydrodispersions.

Gers-Barlag et al. teach sunscreen formulations. O/W emulsions and hydrodispersions are taught as interchangeable cosmetic formulations for sunscreens. Hydrodispersions are taught as preferable forms because they do not impart irritation to the skin of a user as a result of surfactants, as hydrodispersions do not contain surfactants. See Col. 2, line 15-Col. 3, line 32.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to teach the oil-in-water emulsions of the combined references in the form of hydrodispersions because Gers-Barlag et al. teach these formulations as interchangeable and because of the expectation of achieving a product that is less irritating to the skin of the user.

Art Unit: 1617

Conclusion

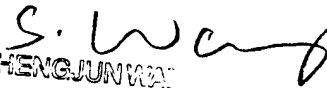
No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shobha Kantamneni whose telephone number is 571-272-2930. The examiner can normally be reached on Monday-Tuesday, Thursday-Friday, 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, Ph.D can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shobha Kantamneni, Ph.D
Patent Examiner
Art Unit : 1617


SHENGJUN WANG
EXAMINER